(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 14 July 2005 (14.07.2005)

PCT

(10) International Publication Number WO 2005/063721 A1

- (51) International Patent Classification⁷: C07D 239/42, A01N 43/54
- (21) International Application Number:

PCT/US2004/042302

(22) International Filing Date:

16 December 2004 (16.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/531,300 19 December 2003 (19.12.2003) US 60/598,397 3 August 2004 (03.08.2004) US

- (71) Applicant (for all designated States except US): E.I. DUPONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CLARK, David, Alan [GB/US]; 109 Stoney Ridge Road, Landenberg, PA 19350 (US). FINKELSTEIN, Bruce, Lawrence [US/US]; 26 Auspice Circle, Newark, DE 19711 (US). ARMEL, Gregory, Russell [US/US]; 514 Turnberry Court, Bear, DE 19701 (US). WITTENBACH, Vernon, Arie [US/US]; 609 Greenbank Road, Wilmington, DE 19808 (US).

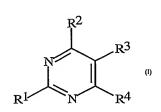
- (74) Agent: BIRCH, Linda, D.; E.I. Du Pont De Nemours And Company, Legal Patent Records Center, 4417 Lancaster Pike, Wilmington, DE 19805 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HERBICIDAL PYRIMIDINES



(57) **Abstract:** Compounds of Formula I, and their *N*-oxides and agriculturally suitable salts, are disclosed which are useful for controlling undesired vegetation wherein R^1 is cyclopropyl optionally substituted with 1-5 R^5 , isopropyl optionally substituted with 1-5 R^6 , or phenyl optionally substituted with 1-3 R^7 ; R^2 is $((O)_jC(R^{15})(R^{16}))_kR$; R is CO_2H or a herbicidally effective derivative of CO_2H ; R^3 is halogen, cyano, nitro, OR^{20} , SR^{21} or $N(R^{22})R^{23}$; R^4 is $-N(R^{24})R^{25}$ or $-NO_2$; R^{20} is 0 or 1; and R^{20} is 0 or 1; provided that when R^{20} is 0, then R^{20} is 0; and R^{20} , R^{20} , R^{21} , R^{22} , R^{23} , R^{24} and R^{25} are as defined in the disclosure. Also disclosed are compositions comprising the compounds of Formula I and a method for controlling undesired vegetation

which involves contacting the vegetation or its environment with an effective amount of a compound of Formula I. Also disclosed are compositions comprising a compound of Formula I and at least one additional active ingredient selected from the group consisting of an other herbicide and a herbicide safener.